

ABSTRACT

An optical cavity structure for bending optical signals is provided. The optical cavity structure includes an input port for receiving input optical signals from a first waveguide. The optical cavity structure also includes an interconnecting structure that receives said input optical signals and interconnects said first waveguide to a second waveguide, the interconnecting structure further includes at least four straight edges that orthogonal and of a finite width. The optical cavity structure further includes an output port coupled to the interconnecting structure for providing the second waveguide with the input optical signals. Further, the optical cavity structure may be used to create three dimensional splitter devices and resonators.